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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/711,055	08/19/2004	Yasuhiro UMEKAGE	29288.4637	5054
20322	7590	11/15/2005	EXAMINER	
SNELL & WILMER ONE ARIZONA CENTER 400 EAST VAN BUREN PHOENIX, AZ 850040001			MACK, COREY D	
			ART UNIT	PAPER NUMBER
			2855	

DATE MAILED: 11/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/711,055	UMEKAGE ET AL.	
	Examiner	Art Unit	
	Corey D. Mack	2855	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 10/019,418.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____.  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>9/28/04, 8/19/04</u> .  | 6) <input type="checkbox"/> Other: ____.                                    |

## DETAILED ACTION

### *Specification*

1. Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

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3. The abstract of the disclosure is objected to because of the use of the language "For the purpose of solving the above problems, the present invention includes". Correction is required. See MPEP § 608.01(b).

4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

### *Claim Objections*

5. Claim 5 is objected to because of the following informalities: line 3 recites "the *fist* time". This appears to be a typographical error. Appropriate correction is required.

### *Claim Rejections - 35 USC § 103*

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nabulsi (US 5,918,281) in view of Fletcher-Haynes (US 5,831,175).

A. With respect to Claim 1, Nabulsi discloses an ultrasonic wave flowmeter, comprising: a transmitter 12 for transmitting an ultrasonic wave signal; a receiver 14 for receiving the ultrasonic wave signal which has been transmitted from the transmitter and has been propagated through the fluid; a reception detecting section 22 for receiving an output of the receiver and detecting the ultrasonic wave signal; a delay section 24 for receiving an output of the reception detecting section and outputting it to the transmitter so that the ultrasonic wave signal is transmitted again; a counter 44 for counting the number of detections by the reception detecting

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section; a timer 16 for repeatedly measuring a time period from the time when the transmission of the ultrasonic wave signal by the transmitter is started to the time when the counter reaches a predetermined value  $N_2$ ; a calculation section 16 for calculating a velocity of the fluid, based on an output of the timer; and, a delay control section 16 for controlling the delay section to change the delay time of the delay section each time the measurement is made (column 5, line 12 – column 7, line 15). However, Nabulsi does not explicitly disclose measuring flow rate.

Fletcher-Haynes discloses an ultrasonic flowmeter including circuitry comprising a timer (time window) and calculation section 32 for calculating a flow rate of the fluid, based on an output of the timer in order to provide an accurately match the transmission and reception windows (column 10, line 55 – column 17, line 23). Therefore, at the time the invention was made, it would have been within the knowledge of one of ordinary skill in the art to include in Nabulsi, a timer and calculation section that calculates flow rate based on the output of the timer, in order to accurately match the transmission and reception windows.

B. With respect to Claim 2, Nabulsi discloses that the delay control section controls the delay section to maintain the delay time of the delay section to be constant when an output of the calculating section is greater or equal to a predetermined value (column 5, line 63 – column 6, line 5).

C. With respect to Claim 3, Nabulsi discloses the claimed invention, including a first timer 16 for measuring a time period from the time  $t_1$  when the transmitter transmits the ultrasonic wave signal to the time when the reception detecting section detects the ultrasonic wave signal; a second timer 16 for measuring a time period  $t_2$ ,  $t_4$  from the time when the reception detecting section detects the ultrasonic wave signal to the time when an output of the first timer is

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changed; and, a calculation section 16 calculates flow velocity based on first and second time periods (column 5, line 12 – column 7, line 15).

D. With respect to Claim 4, Nabulsi discloses the claimed invention, including the second timer 16 is corrected by the first timer (column 5, line – column 7, line 15).

E. With respect to Claim 5, Nabulsi discloses the claimed invention, including a temperature sensor 82, wherein the second timer 16 is corrected by the first timer when the change in an output of the temperature sensor is greater or equal to a predetermined value (column 7, lines 16 – column 11, line 33).

F. With respect to Claim 6, Nabulsi discloses the claimed invention, including a power supply voltage sensor 92, 92a for detecting a power supply voltage VDD for a circuit, wherein the second timer is corrected by the first timer when the change in an output of the power supply voltage sensor is greater or equal to a predetermined value (column 9, line 49 – column 11, line 33).

G. With respect to Claim 7, Nabulsi discloses the claimed invention, including that the second timer is corrected (SET/RESET) by the first timer immediately after the measurement of time by the second timer (column 5, line 12 – column 7, line 15).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Corey D. Mack whose telephone number is (571) 272-2181. The examiner can normally be reached on M-F, 8:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on (571) 272-2180. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Corey D. Mack, Esq.  
Patent Examiner  
Art Unit 2855

November 9, 2005



**HARSHAD PATEL**  
**PRIMARY EXAMINER**